

Amendments to the Specification:

Please replace the first paragraph beneath the heading “O<sub>2</sub> Sensor Life Detailed Example” on page 8 with the following amended paragraph:

The O<sub>2</sub> sensor lifetime is dependent on two variables, temperature, and O<sub>2</sub> concentration. Interfacing an O<sub>2</sub> sensor 25 to an embedded controller 20 designed to control temperature and O<sub>2</sub> (among other parameters) as aforementioned allows the lifetime usage of the sensor to be monitored and ultimately can warn a user of impending sensor replacement. The preferred embodiment analyzes the sensor for lifetime adjustment every hours a determined by the cumulative clock within the controller 20. As the hour roll-over occurs, the sensor lifetime value is adjusted and normalized to an hour count stored in %O<sub>2</sub> lifetime hours used at 20 20 °C. The normalization includes assumptions that the O<sub>2</sub> concentration and the O<sub>2</sub> concentration and the O<sub>2</sub> sensor temperature remained constant over the previous hour. Although this assumption may at first appear invalid, 1) an incubator application typically holds parameters constant for long periods of time, 2) it is easily adapted to a different application, and 3) the O<sub>2</sub> sensor life hours count is a large number (thus if small numbers of the hour roll-overs are inaccurate it will not effect the final result). The following code snippet is an excerpt from the firmware in the embedded controller 20 that executes every hour to increase the O<sub>2</sub> sensor lifetime:

Code Snippet (executes every hour):

```
O2SensorLifeUsed20C=
+=(FLOAT)(((FLOAT)O2Act/10.0))*((float)(100.0/(1192.0/(exp(2.0+(0.0239*(Temp/10
0))))))));
```

O2Act = 10 \* percentage O<sub>2</sub>  
Temp = 10 \* temperature (°C).

Example:

O2Act = 250 (25% O<sub>2</sub>)

Temp = 10 \* temperature (°C)  
O2SensorLifeUsed += 37.523

Please replace the "ABSTRACT OF THE DISCLOSURE" with the following amended paragraph:

AZ  
Methods and apparatus for a predictive warning system of the failure of O<sub>2</sub> and CO<sub>2</sub> sensors, which are particularly suited for an incubator environment are disclosed. An application of the predictive failure of O<sub>2</sub> and CO<sub>2</sub> sensor method and apparatus to incubators is also disclosed. The method and apparatus includes a gas sensor, an embedded controller for analyzing the gas sensor and an interface for indicating a gas sensor failure to a user.